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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,447	03/20/2001	Shuichi Yabu	35.G2760	9561

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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

MATHEWS, ALAN A

ART UNIT PAPER NUMBER

2851

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

113

Office Action Summary	Application No. 09/811,447	Applicant(s) YABU, SHUICHI	
	Examiner Alan A. Mathews	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15,17-35,37-47,49-51 and 53-74 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13,17-20,26-28,40-47,49-51,53-55,62,63 and 71-80 is/are allowed.
- 6) ☒ Claim(s) 21,24,29-35,37-39,56,61,64,66,69 and 70 is/are rejected.
- 7) ☒ Claim(s) 14,15,22,23,25,57-60,65,67 and 68 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7-03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claims 14 and 15 are objected to because of the following informalities: In claim 14, lines 2 and 3, there is no proper antecedent basis in the claim for “said projection optical system”. If “said projection optical system” were amended to recite “said illumination optical system”, claim 14 would then duplicate claim 13. Similarly, in claim 15, lines 2, there is no proper antecedent basis for “said projection optical system”. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 21, 24, 29, 31 –35, 37-39, 64, and 69 are rejected under 35 U.S.C. 102(e) as being anticipated by Murayama et al. (U. S. Patent No. 6,341,006, cited on Applicant’s PTO-1449). Murayama et al. discloses in a second embodiment show in figure 5 and column 15, lines 65-67, and column 16, lines 1 and 2, supplying a first gas into predetermined space 118a

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(chamber or hermetic space). Column 16, lines 53-60, discloses supplying another inert gas which has a different refractive index into to chamber 118a. This “another inert gas” would be considered a second gas. Murayama et al. discloses in a second example, column 17, lines 1-8, changing the inert gas supplied to hermetic space 24a to another which has a different refractive index. This “another inert gas” would be considered a second gas. The hermetic space would 24a would be considered to be a chamber. Murayama et al. also discloses a third embodiment in figure 13 and column 21, lines 57-67, and column 22, lines 1-24. In this third embodiment, gas supply device 250 supplies a chamber S1 surrounding a predetermined space with an inert gas (see column 21, line 66). Column 22, lines 7-24, discloses leaking ArF gas (which would be a different gas) into chamber S1. This would be supplying a second gas, different from the first gas, into the chamber S1. This leakage of the second gas (ArF) would be after the first inert gas is supplied to chamber S1. With respect to claim 24, this leakage of the second gas would be at a different amount per unit time than the first gas. With respect to claim 29, column 1, line 13, discloses using ultraviolet light. With respect to claim 31, optical elements are contained in the chambers. With respect to claim 32, the hermetic space 24a would contain many optical elements, since it is in a projection optical system 12.

1. Claims 56, 61, 64, 66, and 70 are rejected under 35 U.S.C. 102(a) as being anticipated by the PCT Publication WO 00/31780. The PCT Publication WO 00/31780 discloses in figure 1 purge gas supply systems 28 and 69 (see EP 1 143 491 A1 for a translation). Element 45 is the chamber. Element 34 supplies the first inert gas (which could be either nitrogen, helium, neon, argon, krypton, xenon, radon, hydrogen). Element 32 is the second gas supply unit for supplying

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a second gas (dry air), different from the first gas, into chamber 45. If one chose one of the heavier inert gases, it would have a higher molecular weight than the second gas. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murayama et al. in view of Mizutani et al. (U. S. Patent No. 6,184,972). Murayama et al. discloses the invention except for specifically stating that the illumination source is one of an F2 laser and an Ar2 laser. Mizutani et al. discloses in column 25, line 33, the old and well-known concept of using of an F2 laser. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide Murayama et al. with an F2 laser in view of Mizutani et al. for the well-known purpose of using smaller wavelength to obtain smaller dimensions of the circuit elements.

Allowable Subject Matter

6. Claims 1-13, 17-20, 26-28, 40-47, 49-51, 53-55, 62, 63, and 71-80 are allowed. Claims 14 and 15 are objected to as failing to provide antecedent basis for “said projection optical system”, but would be allowable if rewritten to correct the lack of antecedent basis. Claims 22-23, 25, 57-60, and 65, 67, and 68 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

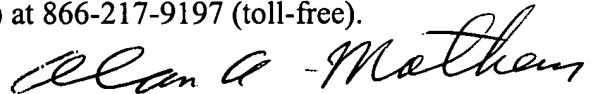
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents on Applicant's PTO 1449 are cited for the same reasons Applicant cited them in his INFORMATION DISCLOSURE STATEMENT.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan A. Mathews whose telephone number is (571) 272-2123. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on (571) 272-2851. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, reading "Alan A. Mathews". The signature is written in a cursive, flowing style.

Alan A. Mathews
Primary Examiner
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AAM